WHAT IS CLAIMED IS:

1. An arithmetic performance attribution method for determining portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, comprising the steps of:

(a) determining coefficients $(A+\alpha_t)$, where the values α_t are defined as

$$\alpha_t = \left[\frac{R - \overline{R} - A\sum_{k=1}^{T}(R_k - \overline{R}_k)}{\sum_{k=1}^{T}(R_k - \overline{R}_k)^2}\right](R_t - \overline{R}_t),$$

where A has any predetermined value, R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)] - 1,$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)] - 1;$$

and

(b) determining the portfolio performance as

$$R - \overline{R} = \sum_{t=1}^{T}(A+\alpha_t)(R_t - \overline{R}_t) .$$

2. The method of claim 1, wherein A is

$$A = \frac{1}{T}\left[\frac{(R-\overline{R})}{(1+R)^{1/T} - (1+\overline{R})^{1/T}}\right], \; where \quad R \neq \overline{R},$$

or for the special case $R = \overline{R}$:

$$A = (1+R)^{(T-1)/T}.$$

3. The method of claim 1, wherein A = 1.

4. The method of claim 1, wherein step (b) is performed by determining the portfolio performance as

$$R - \overline{R} = \sum_{t=1}^{T}\sum_{i=1}^{N}(A+\alpha_t)(I_{it}^{A} + S_{it}^{A}) ,$$

where I_{it}^{A} is an issue selection for sector i and period t, and S_{it}^{A} is a sector selection for sector i and period t.

5. A computer system, comprising:

a processor programmed to perform an arithmetic performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining coefficients $(A+\alpha_t)$, where the values α_t are defined as

$$\alpha_t = \left[\frac{R-\overline{R}-A\sum_{k=1}^{T}(R_k-\overline{R}_k)}{\sum_{k=1}^{T}(R_k-\overline{R}_k)^2}\right](R_t-\overline{R}_t),$$

where A has any predetermined value, R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, R is determined by

$$R=[\prod_{t=1}^{T}(1+R_t)]-1,$$

and $\overline{R}$ is determined by

$$\overline{R}=[\prod_{t=1}^{T}(1+\overline{R}_t)]-1;$$

and determining the portfolio relative performance as

$$R-\overline{R}=\sum_{t=1}^{T}(A+\alpha_t)(R_t-\overline{R}_t);\text{ and}$$

a display device coupled to the processor for displaying a result of the arithmetic performance attribution computation.

6. A computer readable medium which stores code for programming a processor to perform an arithmetic performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining coefficients $(A+\alpha_t)$, where the values α_t are defined as

$$\alpha_t = \left[\frac{R-\overline{R}-A\sum_{k=1}^{T}(R_k-\overline{R}_k)}{\sum_{k=1}^{T}(R_k-\overline{R}_k)^2}\right](R_t-\overline{R}_t),$$

where A has any predetermined value, R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)] - 1\,,$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)] - 1\,;$$

and determining the portfolio relative performance as $R - \overline{R} = \sum_{t=1}^{T}(A+\alpha_t)(R_t - \overline{R}_t)$.

7. A geometric performance attribution method for determining portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, comprising the steps of:

determining attribution effects for issue selection $(1+I_{it}^G)$ given by

$$1+I_{it}^G = \frac{1+w_{it}r_{it}}{1+w_{it}\overline{r}_{it}}\Gamma_t^I\ ,$$

and determining attribution effects for sector selection $(1+S_{it}^G)$ given by

$$1+S_{it}^G = \left(\frac{1+w_{it}\overline{r}_{it}}{1+\overline{w}_{it}\overline{r}_{it}}\right)\left(\frac{1+\overline{w}_{it}\overline{R}_t}{1+w_{it}\overline{R}_t}\right)\Gamma_t^S\ ,$$

where r_{jt} is a portfolio return for sector j for period t, $\overline{r}_{jt}$ is a benchmark return for sector j for period t, w_{jt} is a weight for r_{jt}, $\overline{w}_{jt}$ is a weight for $\overline{r}_{jt}$, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)] - 1$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)] - 1\,;$$

and determining the portfolio performance as

$$\frac{1+R}{1+\overline{R}} = \prod_{t=1}^{T}\prod_{i=1}^{N}(1+I_{it}^G)(1+S_{it}^G)\,.$$

8. The method of claim 7, wherein the values of $\Gamma_t{}^I$ are

$$\Gamma_t^I = \left[\frac{1+R_t}{1+\widetilde{R}_t}\prod_{j=1}^{N}\left(\frac{1+w_{jt}\bar{r}_{jt}}{1+w_{jt}r_{jt}}\right)\right]^{1/N}$$ and the values of Γ_t^S are

$$\Gamma_t^S = \left[\frac{1+\widetilde{R}_t}{1+\overline{R}_t}\prod_{j=1}^{N}\left(\frac{1+\overline{w}_{jt}\bar{r}_{jt}}{1+w_{jt}\bar{r}_{jt}}\right)\left(\frac{1+w_{jt}\overline{R}_t}{1+\overline{w}_{jt}\overline{R}_t}\right)\right]^{1/N}.$$

9. The method of claim 7, wherein the values of $\Gamma_t{}^I$ and $\Gamma_t{}^S$ are

$$\Gamma_t{}^I = \Gamma_t{}^S = \Gamma_t = \left[\left(\frac{1+R_t}{1+\overline{R}_t}\right)\prod_{j=1}^{N}\frac{(1+\overline{w}_{jt}\bar{r}_{jt})(1+w_{jt}\overline{R}_t)}{(1+w_{jt}r_{jt})(1+\overline{w}_{jt}\overline{R}_t)}\right]^{\frac{1}{2N}}.$$

10. A computer system, comprising:

a processor programmed to perform a geometric performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining attribution effects for issue selection $(1+I_{it}^G)$ given by

$$1+I_{it}^G = \frac{1+w_{it}r_{it}}{1+w_{it}\bar{r}_{it}}\Gamma_t^I,$$

and determining attribution effects for sector selection $(1+S_{it}^G)$ given by

$$1+S_{it}^G = \left(\frac{1+w_{it}\bar{r}_{it}}{1+\overline{w}_{it}\bar{r}_{it}}\right)\left(\frac{1+\overline{w}_{it}\overline{R}_t}{1+w_{it}\overline{R}_t}\right)\Gamma_t^S,$$

where r_{jt} is a portfolio return for sector j for period t, $\bar{r}_{jt}$ is a benchmark return for sector j for period t, w_{jt} is a weight for r_{jt}, $\overline{w}_{jt}$ is a weight for $\bar{r}_{jt}$, R is determined by

$$R = \left[\prod_{t=1}^{T}(1+R_t)\right]-1$$

and $\overline{R}$ is determined by

$$\overline{R} = \left[\prod_{t=1}^{T}(1+\overline{R}_t)\right]-1,$$

and determining the portfolio performance as

$$\frac{1+R}{1+\overline{R}}=\prod_{t=1}^{T}\prod_{i=1}^{N}(1+I_{it}^{G})(1+S_{it}^{G});$$

and

a display device coupled to the processor for displaying a result of the geometric performance attribution computation.

11. The system of claim 10, wherein the values of $\Gamma_t{}^{I}$ are

$$\Gamma_t^I=\left[\frac{1+R_t}{1+\widetilde{R}_t}\prod_{j=1}^{N}\left(\frac{1+w_{jt}\overline{r}_{jt}}{1+w_{jt}r_{jt}}\right)\right]^{1/N}$$ and the values of Γ_t^S are

$$\Gamma_t^S=\left[\frac{1+\widetilde{R}_t}{1+\overline{R}_t}\prod_{j=1}^{N}\left(\frac{1+\overline{w}_{jt}\overline{r}_{jt}}{1+w_{jt}\overline{r}_{jt}}\right)\left(\frac{1+w_{jt}\overline{R}_t}{1+\overline{w}_{jt}\overline{R}_t}\right)\right]^{1/N}.$$

12. A computer readable medium which stores code for programming a processor to perform a geometric performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining attribution effects for issue selection $(1+I_{it}^{G})$ given by

$$1+I_{it}^{G}=\frac{1+w_{it}r_{it}}{1+w_{it}\overline{r}_{it}}\Gamma_t^I\ ,$$

and determining attribution effects for sector selection $(1+S_{it}^{G})$ given by

$$1+S_{it}^{G}=\left(\frac{1+w_{it}\overline{r}_{it}}{1+\overline{w}_{it}\overline{r}_{it}}\right)\left(\frac{1+\overline{w}_{it}\overline{R}_t}{1+w_{it}\overline{R}_t}\right)\Gamma_t^S\ ,$$

where r_{jt} is a portfolio return for sector j for period t, $\overline{r}_{jt}$ is a benchmark return for sector j for period t, w_{jt} is a weight for r_{jt}, $\overline{w}_{jt}$ is a weight for $\overline{r}_{jt}$, R is determined by

$$R=[\prod_{t=1}^{T}(1+R_t)]-1$$

and $\overline{R}$ is determined by

$\overline{R}=[\prod_{t=1}^{T}(1+\overline{R}_t)]-1$; and determining the portfolio performance as

$$\frac{1+R}{1+\overline{R}}=\prod_{t=1}^{T}\prod_{i=1}^{N}(1+I_{it}^{G})(1+S_{it}^{G}).$$

13. The computer readable medium of claim 12, wherein the values of Γ_t^I are

$$\Gamma_t^I=\left[\frac{1+R_t}{1+\widetilde{R}_t}\prod_{j=1}^{N}\left(\frac{1+w_{jt}\overline{r}_{jt}}{1+w_{jt}r_{jt}}\right)\right]^{1/N}$$ and the values of Γ_t^S are

$$\Gamma_t^S=\left[\frac{1+\widetilde{R}_t}{1+\overline{R}_t}\prod_{j=1}^{N}\left(\frac{1+\overline{w}_{jt}\overline{r}_{jt}}{1+w_{jt}\overline{r}_{jt}}\right)\left(\frac{1+w_{jt}\overline{R}_t}{1+\overline{w}_{jt}\overline{R}_t}\right)\right]^{1/N}.$$

14. A geometric performance attribution method for determining portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, comprising the steps of:

determining attribution effects $1+Q_{ijt}^{G}$ given by

$$1+Q_{ijt}^{G}=\prod_{k}\left(\frac{1+a_{ijt}^{k}}{1+b_{ijt}^{k}}\right)\Gamma_{ijt}^{k},$$

where Γ_{ijt}^{k} are corrective terms that satisfy the constraint $\prod_{ij}(1+Q_{ijt}^{G})=\frac{1+R_t}{1+\overline{R}_t}$, each of $a^k{}_{ijt}$ and $b^k{}_{ijt}$ is a coefficient for attribution effect j, sector i, and period t, the coefficients a_{ijt}^{k} and b_{ijt}^{k} are obtained from arithmetic attribution effects $Q_{ijt}^{A}=\sum_k a_{ijt}^{k}-\sum_k b_{ijt}^{k}$ which correspond to the attribution effects $1+Q_{ijt}^{G}$, R_t is a portfolio return for period t, $\overline{R}_t$ is a benchmark return for period t, where R is determined by

$$R=[\prod_{t=1}^{T}(1+R_t)]-1$$

and $\overline{R}$ is determined by

$$\overline{R}=[\prod_{t=1}^{T}(1+\overline{R}_t)]-1;$$ and

determining the portfolio performance as

$$\frac{1+R}{1+\overline{R}}=\prod_{t=1}^{T}\prod_{i=1}^{N}\prod_{j=1}^{M}(1+Q_{ijt}^{G}).$$

15. The method of claim 14, wherein M = 2, $1+Q^G_{i1t}$ are attribution effects for issue election given by $1+Q^G_{i1t} = \frac{1+w_{it}r_{it}}{1+w_{it}\bar{r}_{it}}\Gamma^I_t$, and $1+Q^G_{i2t}$ are attribution effects for sector selection given by $1+Q^G_{i2t} = \left(\frac{1+w_{it}\bar{r}_{it}}{1+\bar{w}_{it}\bar{r}_{it}}\right)\left(\frac{1+\bar{w}_{it}\bar{R}_t}{1+w_{it}\bar{R}_t}\right)\Gamma^S_t$,

where r_{it} is a portfolio return for sector i for period t, $\bar{r}_{it}$ is a benchmark return for sector i for period t, w_{it} is a weight for r_{it}, $\bar{w}_{it}$ is a weight for $\bar{r}_{it}$, the values of $\Gamma_t^{\,I}$ are

$$\Gamma^I_t = \left[\frac{1+R_t}{1+\tilde{R}_t}\prod_{i=1}^{N}\left(\frac{1+w_{it}\bar{r}_{it}}{1+w_{it}r_{it}}\right)\right]^{1/N}, \text{ and}$$

the values of Γ^S_t are $\Gamma^S_t = \left[\frac{1+\tilde{R}_t}{1+\bar{R}_t}\prod_{i=1}^{N}\left(\frac{1+\bar{w}_{it}\bar{r}_{it}}{1+w_{it}\bar{r}_{it}}\right)\left(\frac{1+w_{it}\bar{R}_t}{1+\bar{w}_{it}\bar{R}_t}\right)\right]^{1/N}$.

16. A computer system, comprising:

a processor programmed to perform a geometric performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods t, where t varies from 1 to T, by determining attribution effects $1+Q^G_{ijt}$ given by

$$1+Q^G_{ijt} = \prod_k\left(\frac{1+a^k_{ijt}}{1+b^k_{ijt}}\right)\Gamma^k_{ijt},$$

where Γ^k_{ijt} are corrective terms that satisfy the constraint $\prod_{ij}(1+Q^G_{ijt}) = \frac{1+R_t}{1+\bar{R}_t}$, each of $a^k{}_{ijt}$ and $b^k{}_{ijt}$ is a coefficient for attribution effect j, sector i, and period t, the coefficients a^k_{ijt} and b^k_{ijt} are obtained from arithmetic attribution effects $Q^A_{ijt} = \sum_k a^k_{ijt} - \sum_k b^k_{ijt}$ which correspond to the attribution effects $1+Q^G_{ijt}$, R_t is a portfolio return for period t, $\bar{R}_t$ is a benchmark return for period t, R is determined by

$$R = [\prod_{t=1}^{T}(1+R_t)] - 1$$

and $\overline{R}$ is determined by

$$\overline{R} = [\prod_{t=1}^{T}(1+\overline{R}_t)] - 1, \text{ and}$$

determining the portfolio performance as $\frac{1+R}{1+\overline{R}} = \prod_{t=1}^{T}\prod_{i=1}^{N}\prod_{j=1}^{M}(1+Q_{ijt}^{G})$; and

a display device coupled to the processor for displaying a result of the geometric performance attribution computation.

17. The system of claim 16, wherein M = 2, $1+Q_{i1t}^{G}$ are attribution effects for issue election given by $1+Q_{i1t}^{G} = \frac{1+w_{it}r_{it}}{1+w_{it}\overline{r}_{it}}\Gamma_t^I$, and $1+Q_{i2t}^{G}$ are attribution effects for sector selection given by $1+Q_{i2t}^{G} = \left(\frac{1+w_{it}\overline{r}_{it}}{1+\overline{w}_{it}\overline{r}_{it}}\right)\left(\frac{1+\overline{w}_{it}\overline{R}_t}{1+w_{it}\overline{R}_t}\right)\Gamma_t^S$,

where r_{it} is a portfolio return for sector *i* for period *t*, $\overline{r}_{it}$ is a benchmark return for sector *i* for period *t*, w_{it} is a weight for r_{it}, $\overline{w}_{it}$ is a weight for $\overline{r}_{it}$, the values of Γ_t^I are

$$\Gamma_t^I = \left[\frac{1+R_t}{1+\tilde{R}_t}\prod_{i=1}^{N}\left(\frac{1+w_{it}\overline{r}_{it}}{1+w_{it}r_{it}}\right)\right]^{1/N}, \text{ and}$$

the values of Γ_t^S are $\Gamma_t^S = \left[\frac{1+\tilde{R}_t}{1+\overline{R}_t}\prod_{i=1}^{N}\left(\frac{1+\overline{w}_{it}\overline{r}_{it}}{1+w_{it}\overline{r}_{it}}\right)\left(\frac{1+w_{it}\overline{R}_t}{1+\overline{w}_{it}\overline{R}_t}\right)\right]^{1/N}$.

18. A computer readable medium which stores code for programming a processor to perform a geometric performance attribution computation to determine portfolio performance, relative to a benchmark, over multiple time periods *t*, where *t* varies from 1 to *T*, by determining attribution effects $1+Q_{ijt}^{G}$ given by

$$1+Q_{ijt}^{G} = \prod_{k}\left(\frac{1+a_{ijt}^{k}}{1+b_{ijt}^{k}}\right)\Gamma_{ijt}^{k},$$

where Γ_{ijt}^k are corrective terms that satisfy the constraint $\prod_{ij}(1+Q_{ijt}^G)=\frac{1+R_t}{1+\overline{R}_t}$, each of $a^k{}_{ijt}$ and $b^k{}_{ijt}$ is a coefficient for attribution effect j, sector i, and period t, R_t is a portfolio return for period t, the coefficients a_{ijt}^k and b_{ijt}^k are obtained from arithmetic attribution effects $Q_{ijt}^A=\sum_k a_{ijt}^k-\sum_k b_{ijt}^k$ which correspond to the attribution effects $1+Q_{ijt}^G$, $\overline{R}_t$ is a benchmark return for period t, R is determined by $R=[\prod_{t=1}^{T}(1+R_t)]-1$, and $\overline{R}$ is determined by $\overline{R}=[\prod_{t=1}^{T}(1+\overline{R}_t)]-1$, and determining the portfolio performance as

$$\frac{1+R}{1+\overline{R}}=\prod_{t=1}^{T}\prod_{i=1}^{N}\prod_{j=1}^{M}(1+Q_{ijt}^G).$$

19. The computer readable medium of claim 18, wherein M = 2, $1+Q_{i1t}^G$ are attribution effects for issue election given by $1+Q_{i1t}^G=\frac{1+w_{it}r_{it}}{1+w_{it}\overline{r}_{it}}\Gamma_t^I$, and $1+Q_{i2t}^G$ are attribution effects for sector selection given by $1+Q_{i2t}^G=\left(\frac{1+w_{it}\overline{r}_{it}}{1+\overline{w}_{it}\overline{r}_{it}}\right)\left(\frac{1+\overline{w}_{it}\overline{R}_t}{1+w_{it}\overline{R}_t}\right)\Gamma_t^S$, where r_{it} is a portfolio return for sector i for period t, $\overline{r}_{it}$ is a benchmark return for sector i for period t, w_{it} is a weight for r_{it}, $\overline{w}_{it}$ is a weight for $\overline{r}_{it}$, the values of $\Gamma_t{}^I$ are

$$\Gamma_t^I=\left[\frac{1+R_t}{1+\widetilde{R}_t}\prod_{i=1}^{N}\left(\frac{1+w_{it}\overline{r}_{it}}{1+w_{it}r_{it}}\right)\right]^{1/N},$$ and

the values of Γ_t^S are $\Gamma_t^S=\left[\frac{1+\widetilde{R}_t}{1+\overline{R}_t}\prod_{i=1}^{N}\left(\frac{1+\overline{w}_{it}\overline{r}_{it}}{1+w_{it}\overline{r}_{it}}\right)\left(\frac{1+w_{it}\overline{R}_t}{1+\overline{w}_{it}\overline{R}_t}\right)\right]^{1/N}$.